Name: Date: Period: \_\_\_\_

**Photosynthesis WebQuest**

***As you navigate through the internet visiting the site below, read each internet passage. Be careful not to plagiarize your answers from the internet; unless you are directed to “copy” something you should summarize what you read on the internet. (5 pts. each)***

***PART I - Visit “Nova Online”***

[**http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html**](http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html)

*Click “Go to Illuminating Photosynthesis” Click “The Cycle”.*

1. What ingredient is required to ensure that both the plant and the person breathe? \_\_\_\_\_\_

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C*lick “Atomic Shuffle”- When it shows the chemical equation click on “Note about this equation”. This will present a simpler equation that is an easier way of looking at the overall equation.*

2. Give the simpler equation for photosynthesis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3. Where does the oxygen come from in the cycle: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Click on “Three Puzzlers” Explain the correct answers for each.*

4. Puzzle one: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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5. Puzzle two: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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6. Puzzle three: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***PART II - Visit the “Stars and Seas” page.***

[**http://www.starsandseas.com/SAS%20Cells/SAS%20cellphysiol/SAS%20photosyn/cellphotosyn.htm**](http://www.starsandseas.com/SAS%20Cells/SAS%20cellphysiol/SAS%20photosyn/cellphotosyn.htm)

*Read the Section On “Photosynthesis ". Briefly explain each of the three steps of photosynthesis.*

7. Part one:

***\_\_\_\_\_\_\_\_\_ + Light + \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ —> \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_***

8. Part two:

\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_ —> ***\_\_\_\_\_\_\_\_\_\_***

Part three:

***CO2 + \_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_ —> \_\_\_\_\_\_\_\_\_\_***

***Visit “Thinkquest”***

[**http://www.calpoly.edu/~mforte/dream/p3.html**](http://www.calpoly.edu/~mforte/dream/p3.html)

9. Describe the Light Reactions of photosynthesis. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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10. Describe the Calvin Cycle of photosynthesis. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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***PART III- Visit “Wikipedia-:the free Encyclopedia” (8 points)***

[**http://en.wikipedia.org/wiki/Photosynthesis**](http://en.wikipedia.org/wiki/Photosynthesis)

11*.* In the contents box click on “Discovery”

Briefly describe the discovery of photosynthesis by explaining the events of the first three scientists. **Underline the name of each scientists as you explain each discovery.**

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***PART IV - Visit the “BioCoach”***

[***http://www.phschool.com/science/biology\_place/biocoach/photosynth/overview.html***](http://www.phschool.com/science/biology_place/biocoach/photosynth/overview.html)

12. Copy and label the picture from Concept 1: An overview of Photosynthesis.

[*http://www.tutorvista.com/content/biology/biology-ii/nutrition/factors-affecting-photosynthesis.php*](http://www.tutorvista.com/content/biology/biology-ii/nutrition/factors-affecting-photosynthesis.php)

*or*

[*http://www.passmyexams.co.uk/GCSE/biology/factors-affecting-rate-of-photosynthesis.html*](http://www.passmyexams.co.uk/GCSE/biology/factors-affecting-rate-of-photosynthesis.html)

13. State and describe the three factors affecting the rate of photosynthesis.

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[*http://scienceline.ucsb.edu/getkey.php?key=1668*](http://scienceline.ucsb.edu/getkey.php?key=1668)

*14.* Which wavelengths of light do bacteria and plants prefer to use for photosynthesis (what colors)?

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<http://www.passmyexams.co.uk/GCSE/biology/structure-of-leaf.html>

15. Copy and label Structure of the Leaf.

16. Copy and label the Structure of a Mesophyll Cell.

[Mesophyll Structure](http://image.slidesharecdn.com/ainvestigatingcells-090420075146-phpapp02/95/a-investigating-cells-17-728.jpg?cb=1240213940)

17. Copy and label: Chloroplast Structure.

<http://biology.tutorvista.com/animal-and-plant-cells/chloroplasts.html>

18. Copy and label picture of Photosynthesis .

<http://www.welchclass.com/Biology/photos/overview.png>